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FILTERABILITY OF THE INFECTIVE AGENT OF PSITTACOSIS IN BIRDS

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The following observations suggest that the causative agent of psittacosis in birds is filterable.

EXPERIMENT I

Parrakeet No. 2 was injected subcutaneously with an emulsion of organs from a parrot that had been regarded as responsible for human infection, and, in addition, part of the carcass of the bird was put into the cage with the parrakeet. This parrakeet was found dead in the cage on the sixth day after inoculation.

An emulsion of the tissues of parrakeet No. 2 was used for the subcutaneous inoculation of parrakeet No. 6. This bird was sick on the seventh day, was chloroformed, and material was taken for further work.

Heart, liver, lungs, kidney, and breast muscle of parrakeet No. 6 were used to prepare an emulsion, part of which was filtered through a Berkefeld N filter. Fluid and plate cultures of this filtrate indicated sterility in the ordinary bacteriological sense. One cubic centimeter of this emulsion (filtrate) was inoculated into the breast muscle of two parrakeets, Nos. 7 and 8. Both these birds died on the seventh day after inoculation. Another portion of the emulsion of organs of parrakeet No. 6 was, at the same time that the filtration test was made, used without filtration to inoculate two parrakeets, Nos. 9 and 10 (controls). The inoculations also were made into the breast muscles, and the amount of the emulsion used was 0.25 c. c. to 0.5 c. c. Parrakeet No. 9 died on the eighth day and No. 10 on the twelfth day.

EXPERIMENT II

Droppings from a parrot that was regarded as having caused human infection were kept dry in a refrigerator for 31 days. At the end of this time a small portion of the droppings was emulsified and part of the emulsion was filtered through a Berkefeld N filter and tested as in the preceding experiment. The filtrate and the unfiltered emulsion

(control) were stored overnight in the ice box before being used for inoculation purposes.

The results of the inoculation of the filtrate and of the unfiltered emulsion into parakeets are shown in the following table. Certain of the birds were given phenolized serum from a recently recovered case of psittacosis (human) and others were given normal human serum, also phenolized. The serum in each case was given just prior to the giving of the infecting material and at a different site.

Birds given filtered emulsion			Controls (emulsion not filtered)		
Bird	Other treatment	Interval between inoculation and death	Bird	Other treatment	Interval between inoculation and death
A	None	Well after 20 days.	G	None	Well after 20 days.
B	do	10 days.	H	Immune serum	11 days.
C	Immune serum	4 hours.	J	do	8 days.
D	do	14 days.	K	Normal serum	4 days.
E	Normal serum	1 day.			
F	do	3 days.			

This experiment shows no material difference between the tests on filtrate and on the unfiltered material. No definite influence of serum is to be seen, for while the birds given the normal serum died much earlier than those given serum from the recovered case, there was one survival of the two birds given filtrate alone, and the single bird given only unfiltered emulsion also survived.

MENTAL DISORDERS AND THE PUBLIC HEALTH

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The public health administrator of the present day is called upon from time to time to make new adjustments and new adaptations to meet the ever changing conditions of modern life. New diseases are being recognized and discovered, demanding studies and investigations for their control and suppression; old diseases lose their significance through changing virulence, a community immunity, modifications in living conditions, or the development of more accurate methods for their prevention; while still other diseases, long recognized, in time become of greater relative importance and significance to the public-health official.

The business of public health is constantly changing. The dramatic and spectacular experiences in the suppression of diseases, borne by insects, water, food, or other physical agents, occur less and less each year. This is probably due, in part, to the fact that mankind

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has become more tolerant and cognizant of the necessity for absolute control of his physical environment. But public sentiment has not been sufficiently aroused to demand the control and suppression of those diseases that are dependent for their prevention on the restriction of individual rights. In the field of public health, the restriction and control of persons, such as disease carriers, affords an altogether different problem from the restriction of things and the control of physical environment.

Efforts to control smallpox further illustrate this situation. One of the most reliable and specific preventives known to medicine is available for the control of this disease, and yet an organized opposition to vaccination demands a constant educational program for the protection of a community against smallpox. Despite the difficulties encountered in the control of those diseases, demanding the control of man himself, the interest of the public-health official is also stimulated by such situations as the increase of cancer, the relative increase of deaths from cardio-vascular diseases or pneumonia, and of those endemic diseases involving the nervous system, such as disseminated sclerosis, anterior-polio-myelitis, encephalitis lethargica, or that wide variety of diseases included under the term of mental disorders. Thus, new adjustments must be made from time to time by health agencies to meet the spirit of the times; but these must be tempered by the customs and traditions of public-health practices and procedure.

The necessity for directing efforts toward the prevention of mental disorders, toward the conservation of mental health, and toward the amelioration of adverse mental states is brought to our attention by the ever-increasing number of persons with mental disorders seeking aid in public institutions. During the 50-year period from 1880 to 1930, the rate of persons under care in State hospitals for the insane alone had increased from 81 to more than 220 per each 100,000 of the general population. The rate had almost trebled, but the actual number of cases under care had increased to almost six times the number under care in 1880. The rapid expansion in public facilities for the care of the group comprising one form of mental illness—namely, the group for whom the public demands segregation—has entailed an enormous outlay of public funds for buildings and equipment, and required yearly increases in expenditures for the care of inmates.

This economic loss is of vital interest to legislators and practical administrators, who are equally desirous of reaching an adequate solution of the problem. An intangible, but none the less important, aspect of such a situation is the economic loss to the community through invaliding so many people in the prime of life, and the suffering of individuals whose families are not infrequently rendered impoverished by such diseases.

The problem of the so-called insanities is only one of the several problems, for other mental disorders also claim attention. These include the mentally defective or feeble-minded, as they are more often termed. Their prevalence is not exactly known; but studies conducted by the Public Health Service, as well as by others, indicate that they may be found in the proportion of about 5 to each 1,000 of the general population. With this figure as a basis, it is estimated that there are at least 500,000 feeble-minded persons in the United States to-day.

Besides this feeble-minded group, there is also a large number of so-called nervous invalids in whom the community is not interested sufficiently to warrant their segregation, but whose illness, nevertheless, interferes with good social adaptation and individual efficiency. These are sometimes called the nervous prostration cases, the hysterical, the neurotic, the psycho-neurotic; or as an interested public has dubbed them, the "shellshocks of civilization." Lastly are those with convulsive disorders, which, for purposes of convenience, have been grouped under the term "epilepsies."

It is obvious from the foregoing statements that those interested in the prevention, control, or suppression of mental diseases must be concerned with a variety of mental disorders and conditions, including the so-called insanities, feeble-mindedness, the epilepsies, and mild manifestations of mental ill health.

For a long time mental diseases were considered apart from general medicine and little effort was made to understand their nature or causes. During the early ages, those afflicted with mental deviation were regarded as either possessed of special virtues which are attributed to the Deity or as having demoniacal qualities acquired of his satanic majesty. In recent years, however, there has been an awakening of interest which has developed the specialty of psychiatry more or less independently of other branches of medical practice. A traditional aversion toward those of unsound mind, shared by the medical profession, probably operated in no small degree to produce this effect. Among other factors which played a part in this independent development was the segregation of mentally disordered persons in public institutions that were more or less isolated and remote from other centers of medical work, and also from a conscious or unconscious isolation on the part of workers engaged in this special field of medical endeavor.

But this isolation of psychiatry is gradually giving way to an appreciation of the relationship of mental factors to many forms of illness and to the establishment of a more common meeting ground with specialists in other branches of medical practice. This has been especially true with regard to those engaged in preventive work. A common meeting ground has been established with the social and

other organizations which minister to the needs of the community with regard to education, dependency, reformation, and other social problems.

In approaching the problem of mental health, the public-health administrator should contemplate the coordination of health activities with those institutional and communal forces that are called upon to minister to the needs of the mentally ill. A broad program of mental hygiene should consider where and under what conditions mental disease occurs and aid in developing appropriate means for the early recognition and treatment of mentally ill persons by providing adequate and suitable facilities for such purposes and by training personnel to undertake the work. It should also contemplate investigations and studies with respect to the underlying reasons or causes of mental ill health and interpret and diffuse such knowledge to the public and medical profession. A balanced program should also consider a just apportionment of the cost of supervision and care of the mentally ill persons by a humane and efficient method of interchange between communities having responsible jurisdictions, thus partly serving in the solution of the economic problems involved. A well-balanced program must take cognizance of the activities of agencies tending to conserve an individual's social integrity and afford such assistance and cooperation as may be possible, either directly or indirectly, that may influence the solution of these problems.

It may be of interest to enumerate briefly the accomplishments and rôle of the United States Public Health Service in carrying such a broad general program into effect. The first contribution of the Public Health Service in the field of mental health had its inception in 1875 when, by a decision of the Supreme Court, all State laws relating to foreign immigration were declared unconstitutional and the authority for the regulation of foreign immigration was declared vested in the Federal Government. This left suspended the means by which the separate States could care for the thousands of sick, disabled, and insane immigrants who came to their shores. It was not until 1882, however, six years after State regulation was declared unconstitutional, that the first Federal immigration law was enacted. Several changes took place in this law, a significant one in 1891, since which year the medical examination of arriving aliens has been conducted by officers of the United States Public Health Service. The mental disorders that are now mandatorily excluded embrace the insane, idiots, imbeciles, feeble-minded, chronic alcoholics, constitutional psychopathic inferiors, and the mentally defective. Our changing immigration policy inaugurated by the per-centum limit plan of restriction provided in 1924 for a system of consular inspection of prospective immigrants in countries of origin. This was by no means a new proposal, for the first bill providing for such a scheme

was introduced into Congress in 1838. During the first year of operation after the passage of the act of 1924, physically and mentally disabled immigrants continued to arrive at ports of entry in the same proportions as before. The same hardships and inconveniences continued, and through invitations of the British and Irish Free State Governments officers of the Public Health Service were stationed in 1925 at seven American consulates in Great Britain and Ireland for the purpose of medically examining prospective immigrants who apply for American immigration visa.

The results of this experiment of examining prospective immigrants in their country of origin was so satisfactory to all concerned that our Government was asked to continue the practice. Other governments, seeing the advantage to be had, extended an invitation for the same procedure to be applied to their nationals. The work inaugurated August 1, 1925, had extended to 9 countries, involving 27 stations and 37 officers of the Public Health Service by February 1926. During the last fiscal year (1928-29) 7 out of every 1,000 prospective immigrants examined abroad were denied permission to immigrate to the United States because of mental disorders.

Throughout the more than 35 years of the experience of the Public Health Service in immigration work, sincere efforts have been made to bring about greater perfection in the recognition of mental defects and diseases among immigrants and to improve the work. As a means for further improving the early recognition of mental disabilities among prospective immigrants, special studies have been made in countries of origin. Heretofore the individual immigrant has been the only unit considered in immigration work. Studies with reference to the feasibility of making the family the unit for consideration are now under way.

Since the growth of our population has been associated with increasing tides of immigration in the past, it might be expected that the foreign-born population would play some rôle in the evolution of public policies involving relief from the Public Treasury. Investigations along these lines indicate that the foreign-born population furnish the highest proportion of admissions to State hospitals; that the native born of foreign or mixed parentage furnish the next highest; and the native born furnish the lowest proportion. The factors productive of such a situation are very complex and form an intricate maze of forces continually working in and through each other. Obviously, the different methods of social adjustments and adaptations made by our foreign-born population must be the result of a variety of factors. It is conceivable, however, that racial traits which influence normal mental health may also be mirrored in abnormal mental states. Thus in mental disorders produced from such exogenous causes as syphilis, infectious diseases, and other physical disturbances, an

important rôle is played in their genesis by the sexual life, social customs, occupations, and habits of different racial groups; and even in those mental diseases in which endogenous factors play an important rôle, racial customs and traditions may be of significance.

It was not until 1914 that the Public Health Service undertook certain field studies and investigations referable to mental hygiene in American communities. These studies dealt with the physical and mental status of school children and with the mental status of the dependent and delinquent classes. Special surveys were made of States and local jurisdictions with reference to the prevalence and needs of the feeble-minded in the general population. Surveys and studies were also undertaken among those under care in institutions devoted to the supervision of the dependent and delinquent classes and of special institutions devoted to the care of the feeble-minded. Certain studies were also made in connection with juvenile-court work, with special reference to the mental status of those coming within the purview of such courts. The results of these studies have been published from time to time.

In the examination of some 30,000 American school children opportunity was afforded to ascertain the value of certain psychological tests and to study those children who could not profit by the usual course of study as provided in public schools. At least 20 in every 1,000 belong to this group: Some are feeble-minded, others belong to that twilight zone between normality and feeble-mindedness, others are simply mentally retarded, while still others, because of their emotional instability and because of faulty habits of thought and conduct, are problem children in schools and in the home.

With reference to the feeble-minded the Public Health Service has proceeded on the principle that life-long supervision is fundamental in the solution of this problem. Such a policy embraces a system of state-wide supervision of all mentally defective persons: First, by the early recognition in public schools; second, by training such children in special classes established in connection with educational facilities; third, by exercising care and supervision of those needing it in the community; and fourth, by institutional training and supervision of those who do not benefit by facilities available in the community. A policy of this character involves a state-wide program entailing close cooperation between health agencies, public-school authorities, and those who minister to the needs of mentally disordered persons generally. The machinery necessary to develop such a program concerns itself, first, with the establishment of the State training school for this class of the general population; second, with the organization of special classes in public schools; and third, with the development of a placement and supervision agency in the community. An adequate system of medical supervision of schools

should be of assistance in this important undertaking and lend valuable aid to those engaged in this effort.

It was recognized also that among certain children physical defects seemed to play a rôle in the production of mental retardations. Those defects which directly or indirectly affect hearing, such as middle ear disease, adenoids, and enlarged and diseased tonsils, were considered important in the production of retardation. Vision defects did not seem to play such an important rôle in this respect, but conditions associated with malnutrition, such as hookworm disease, intestinal parasites, and malarial cachexia, seemed to play an important rôle. Such findings open up an interesting avenue of speculation with reference to nutrition in childhood and its relation to mental retardation.

Many of the so-called problem cases were recognized as possessed of character traits that are prominent features in the past history of the mental invalids seen in later life. The recognition and correction of these unhealthy habits of thought and conduct in childhood may be of value in the prevention of future mental ill health, and every system for the medical supervision of school should recognize it.

In studies of the personality of feeble-minded children in the community, it was recognized that a variable proportion presented traits of character which were definitely antisocial and that the segregation of such cases was probably essential for the greater part of their lives. Special provision is now being made by some States for the segregation of this class or group in special institutions.

Whereas the Public Health Service has been interested in the study of the mental traits and mental disorders among children, no studies have been made of the preschool age group, and no experience has been acquired in connection with the mental hygiene problems arising in preparatory schools or colleges. Moreover, no experience has been had in relation to modifications or the development of the curricula of medical, theological, or law schools bearing upon the nature of mental health problems which such professions encounter in their daily work.

With the advent of the Great War, Congress created a venereal disease division in the Public Health Service, which has for its object the control and suppression of venereal diseases and research in this particular field. In the activities of that division, intensive cooperation has been maintained with State departments of health; venereal diseases have been made reportable; the manufacture, interstate sale, and purity and potency of arsenicals used in the treatment of these diseases have been supervised; special studies and investigations of diagnostic procedure and treatment have been made and are now being conducted under the supervision of the Public Health Service. Such activities must eventually reflect themselves in the

better control of venereal diseases and, hence, in a reduction in the morbidity and mortality rate of general paresis.

Subsequent to the World War, the Public Health Service was called upon to provide additional hospital facilities for the care of the disabled ex-service man and woman. In the solution of this problem this service initiated a broad program with respect to the care of the mentally disabled ex-service man, and estimated the needs, both present and future, respecting this class of beneficiary. As a member of the Interdepartmental Hospital Board concerned with this problem, it is gratifying to learn that the broad policies laid down, and the estimates made by the Public Health Service are being carried to completion.

The care afforded the insane and other mentally disabled residents of the Territory of Alaska have been the subject of discussion from time to time. In 1929 the Department of Interior asked the cooperation of the Public Health Service in this matter, and pursuant to an act of Congress, an officer was detailed to supervise the care of the Alaska insane under treatment at Portland, Oreg. The outgrowth of such a detail may mean the eventual improvement in the care of, and the development of facilities for, the mentally ill of Alaska.

Special studies of the abusive use of narcotic drugs have been undertaken by the Public Health Service since 1922. On January 19, 1929, Congress authorized the establishment of two institutions for the confinement and treatment of persons addicted to the use of habit-forming narcotic drugs who have committed offenses against the United States, and the Public Health Service was designated as the Federal agency to administer these institutions. The act created within the Public Health Service a Narcotics Division for that purpose. The functions of the newly created division are both administrative and investigative in character. The Congress of the United States has directed that these institutions to care for adult offenders shall be designed and operated as curative and rehabilitation centers.

But curative and rehabilitation centers are not created by legislative acts alone. Nor do sites, locations, buildings, and equipment, while necessary, mean that the institutions will perform these functions. Above all this, there is the necessity for competent, efficient, and interested personnel. It was assumed that such a personnel was available or could be recruited from a suitable permanent organization with a traditional background for accomplishment. In this connection, it may or may not be significant that the Public Health Service was chosen to accomplish this task.

The narcotic farms act provided for the Public Health Service to assume the responsibility for the confinement and treatment of a certain class of Federal prisoners who are addicted to the use of habit-forming drugs. Acting upon this precedent, the Department of

Justice has requested the Public Health Service to assume supervisory charge and to administrate the medical and psychiatric service in Federal prisons under the control of the Department of Justice. Such a plan has the approval of the two departments concerned, and a bill to accomplish it has been introduced into Congress and has already passed the House. With such a scheme the Public Health Service may be in a position to contribute more to the field of mental hygiene in relation to correctional procedure.

In addition to the activities enumerated, the Public Health Service has supplemented the information issued by the Bureau of the Census by ascertaining and publishing currently in the Public Health Reports certain data respecting the incidence of mental diseases in the United States with reference to the admissions and discharges of mentally disordered persons in State institutions. It is obvious that data of this character have some value, but the control and suppression of disease is dependent upon a knowledge as to when, how, and where such diseases occur. An epidemiological approach toward the problem of mental disorders is a necessary adjunct in connection with the control and suppression of mental diseases and is in keeping with the customary approach of agencies dealing with health problems.

COURT DECISION RELATING TO PUBLIC HEALTH

Statute regarding furnishing of health certificate by school-teacher construed.—(Missouri Supreme Court, Division No. 1; *Tate v. School Dist. No. 11 of Gentry County*, 23 S. W. (2d) 1013; decided Dec. 31, 1929.) In an action brought against a school district to recover on a contract of employment as teacher, one of the matters passed on by the supreme court was the construction of a statutory provision reading as follows:

No teacher shall be employed to teach in the schools of Missouri who have [has] not furnished a certificate by a reputable physician, showing said teacher to be in good health and free from any contagious disease at the time the certificate is granted.

The court stated that it was obvious that "it was the legislative intent, derivable from the language used in the statute, that the time of furnishing the required certificate shall be referable to the actual period of employment of the teacher, and not to the date of execution of the contract of employment." Continuing, the court said:

* * * The evident object and purpose of the statute is that the teacher shall be in good health and free from any contagious disease during the term of actual employment, or at least at the beginning of the term of actual employment. *Crabb v. School District*, 93 Mo. App. 254, 260. Any other construction would make the statute uncertain and indefinite in meaning and application; for, if the statute be construed literally, a teacher may comply with the literal requirement of the statute by "furnishing a certificate by a reputable physician, showing said teacher to be in good health and free from any contagious disease at the time the

certificate is granted," although the certificate of the physician may have been granted 1, 5, 10, or any number of years prior to the actual period of employment of the teacher. * * *

DEATHS DURING WEEK ENDED MARCH 22, 1930

Summary of information received by telegraph from industrial insurance companies for the week ended March 22, 1930, and corresponding week of 1929. (From the Weekly Health Index March 28, 1930, issued by the Bureau of the Census Department of Commerce)

	Week ended Mar. 22, 1930	Corresponding week, 1929
Policies in force	75,593,686	73,638,229
Number of death claims	15,822	16,659
Death claims per 1,000 policies in force, annual rate	10.9	11.8

Deaths from all causes in certain large cities of the United States during the week ended March 22, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, March 29, 1930, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Mar. 22, 1930		Annual death rate per 1,000, corre- sponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Mar. 22, 1930 ¹
	Total deaths	Death rate ¹		Week ended Mar. 22, 1930	Corre- sponding week, 1929	
Total (64 cities)	7,862	13.9	14.1	713	770	163
Akron	53			3	5	27
Albany	45	10.5	15.6	2	4	44
Atlanta	88	18.0	15.7	7	7	74
White	41			3	5	95
Colored	47	(²)	(²)	4	2	63
Baltimore	267	16.8	14.1	26	12	88
White	216			22	8	95
Colored	51	(²)	(²)	4	4	65
Birmingham	66	15.5	17.1	6	6	56
White	28			1	4	15
Colored	38	(²)	(²)	5	2	118
Boston	265	17.3	18.5	28	25	79
Bridgeport	33			2	6	34
Buffalo	153	14.4	14.0	16	12	71
Cambridge	35	14.5	13.7	5	1	93
Camden	30	11.6	13.5	4	1	73
Canton	23	10.3	10.3	3	2	74
Chicago	778	12.8	13.2	68	69	60
Cincinnati	140			13	15	77
Cleveland	208	10.7	10.4	24	18	72
Columbus	96	16.7	14.8	7	5	68
Dallas	56	13.4	14.6	7	5	-----
White	34			4	4	-----
Colored	22	(²)	(²)	3	1	-----
Dayton	41	11.6	14.7	3	9	44
Denver	94	16.7	15.1	9	6	94
Des Moines	29	10.0	11.0	1	3	17
Detroit	313	11.8	13.5	46	43	71
Duluth	24	10.7	12.9	4	2	108
El Paso	35	15.5	17.3	2	8	-----
Fall River	32	12.4	8.5	3	4	69
Flint	32	11.2	9.8	6	7	70
Fort Worth	42	12.9	11.6	2	3	-----
White	34			0	3	-----
Colored	8	(²)	(²)	2	0	-----
Grand Rapids	31	9.8	8.6	4	1	61
Houston	62			4	9	-----
White	33			2	8	-----
Colored	29	(²)	(²)	2	1	-----
Indianapolis	100	13.6	16.8	3	4	22
White	84			2	4	17
Colored	16	(²)	(²)	1	0	54
Jersey City	65	10.4	10.4	11	7	96
Kansas City, Kans.	23	10.1	16.7	2	6	47
White	20			2	4	53
Colored	3	(²)	(²)	2	0	0

(See footnotes at end of table.)

Deaths from all causes in certain large cities of the United States during the week ended March 22, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, March 29, 1930, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Mar. 22, 1930		Annual death rate per 1,000, corresponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Mar. 22, 1930 ¹
	Total deaths	Death rate ²		Week ended Mar. 22, 1930	Corresponding week, 1929	
Kansas City, Mo.	116	15.5	14.7	8	12	62
Knoxville	51	25.2	16.8	7	3	164
White	39			6	3	156
Colored	12	(*)	(*)	1	0	247
Los Angeles	311			20	27	61
Louisville	107	16.9	16.1	9	8	78
White	79			8	6	79
Colored	28	(*)	(*)	1	2	72
Lowell	25			3	1	71
Lynn	21	10.4	11.9	2	2	51
Memphis	102	28.0	24.4	4	9	48
White	50			2	3	37
Colored	52	(*)	(*)	2	6	67
Milwaukee	124	11.9	14.5	20	30	101
Minneapolis	99	11.3	11.2	8	14	52
Nashville	52	19.4	20.9	6	8	93
White	31			4	6	82
Colored	21	(*)	(*)	2	2	127
New Bedford	21			2	2	57
New Haven	46	12.8	14.2	6	3	117
New Orleans	173	21.0	18.3	25	13	145
White	98			5	5	44
Colored	75	(*)	(*)	20	8	336
New York	1,618	14.0	14.0	146	168	61
Bronx Borough	236	12.9	11.0	18	15	42
Brooklyn Borough	544	12.3	12.9	67	71	71
Manhattan Borough	631	18.8	19.4	43	68	71
Queens Borough	165	10.1	9.8	14	13	41
Richmond Borough	42	14.5	12.1	4	1	74
Newark, N. J.	114	12.6	15.0	12	11	63
Oakland	68	12.9	14.1	0	4	0
Oklahoma City	42			5	3	98
Omaha	57	13.3	14.0	5	7	37
Paterson	40	14.4	14.8	5	4	87
Philadelphia	544	13.7	13.7	37	54	55
Pittsburgh	185	14.3	16.7	20	23	73
Portland, Oreg.	91			6	1	55
Providence	68	12.4	15.5	6	9	55
Richmond	49	13.1	17.2	1	6	15
White	31			0	2	0
Colored	18	(*)	(*)	1	4	44
Rochester	77	12.2	11.4	5	6	44
St. Louis	250	15.9	17.3	12	20	39
St. Paul	59			2	2	20
Salt Lake City ³	39	14.7	14.0	3	7	47
San Antonio	59	14.1	12.7	11	8	42
San Diego	42			2	2	42
San Francisco	162	14.4	12.1	4	6	27
Schenectady	21	11.7	7.8	1	3	31
Seattle	94	12.8	10.3	2	7	29
Somerville	20	10.2	10.7	3	3	26
Spokane	21	10.0	15.3	1	1	26
Springfield, Mass.	38	13.2	14.3	5	5	79
Syracuse	42	11.0	15.7	5	6	62
Tacoma	37	17.5	8.0	1	0	26
Toledo	64	10.7	13.0	3	7	27
Trenton	40	15.0	15.0	5	4	98
Utica	29	14.5	15.5	5	5	142
Washington, D. C.	147	13.9	16.5	13	9	75
White	94			4	7	35
Colored	53	(*)	(*)	9	2	160
Waterbury	24			1	1	26
Wilmington, Del.	31	12.6	16.6	3	3	66
Worcester	50	13.2	15.6	4	9	52
Yonkers	27	11.6	10.3	1	3	24

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.

³ Data for 71 cities.

⁴ Deaths for week ended Friday.

⁵ In the cities for which deaths are shown by color, the colored population in 1929 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended March 22, 1930, and March 23, 1929

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended March 22, 1930, and March 23, 1929

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929
New England States:								
Maine		6	6	26	31	251	2	0
New Hampshire	3	3	7	14	29	36	0	0
Vermont		3			18	7	0	0
Massachusetts	68	84	13	65	862	387	7	5
Rhode Island	4	11		6	2	90	0	0
Connecticut	20	28	9	18	16	515	2	2
Middle Atlantic States:								
New York	126	310	140	152	961	1,214	21	42
New Jersey	146	107	15	22	788	246	11	6
Pennsylvania	150	189			1,297	2,293	21	7
East North Central States:								
Ohio	28	29	12	43	720	1,263	4	5
Indiana	24	30			84	485	14	0
Illinois	164	157	44	220	662	1,637	10	14
Michigan	66	88	8	20	595	417	24	38
Wisconsin	14	17	30	50	835	1,142	4	8
West North Central States:								
Minnesota	14	27	4	1	292	752	3	3
Iowa	6	11			462	57	1	5
Missouri	37	52	9	14	145	384	13	33
North Dakota	5	8			26	81	1	6
South Dakota	1	3	2	1	100	16	0	2
Nebraska	12	16			594	49	4	2
Kansas	13	9	1	26	557	290	3	9
South Atlantic States:								
Delaware	4	1	1	3	18	32	0	0
Maryland	21	20	36	98	19	83	1	1
District of Columbia	18	11		5	1	24	0	0
West Virginia	21	9	22	64	97	249	2	3
North Carolina	33	22	36		25	72	2	5
South Carolina	14	17	914	623		10	4	0
Georgia	6	7	128	55	221	25	10	1
Florida	7	6	2	4	388	26	0	0
East South Central States:								
Kentucky					217	54	2	0
Tennessee	7	11	95	95	287	6	52	5
Alabama	22	26	171	111	312	114	6	7
Mississippi	10	3					11	

¹ New York City only.

² Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended March 22, 1930, and March 23, 1929—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929
West South Central States:								
Arkansas	8	16	68	148	17	56	10	6
Louisiana	18	21	27	99	122	85	2	2
Oklahoma ¹	15	18	54	153	140	27	3	6
Texas	34	21	26	64	129	130	4	2
Mountain States:								
Montana	3	4			33	130	3	6
Idaho		3		6	28	4	2	10
Wyoming	1	2		4	10	22	0	0
Colorado	10	10		4	347	11	2	6
New Mexico	8	4	1	9	122	2	2	3
Arizona	7		8	1	30		4	2
Utah ¹	4	1		4	186	4	5	14
Pacific States:								
Washington	3	7			269	105	9	34
Oregon	11	8	58	107	52	194	1	2
California	54	58	34	102	1,901	57	13	18
Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929
New England States:								
Maine	0	0	52	56	0	2	0	0
New Hampshire	0	0	23	26	0	0	0	0
Vermont	0	0	12	20	1	11	0	0
Massachusetts	0	0	269	336	0	0	0	4
Rhode Island	0	0	20	23	0	0	0	2
Connecticut	0	0	159	74	0	9	1	1
Middle Atlantic States:								
New York	1	1	627	708	16	5	18	11
New Jersey	0	1	308	233	0	0	6	4
Pennsylvania	0	2	547	531	3	0	10	17
East North Central States:								
Ohio	0	2	247	306	174	47	4	16
Indiana	0	0	161	230	144	60	0	6
Illinois	0	3	624	523	139	157	6	4
Michigan	2	1	320	368	79	84	4	5
Wisconsin	0	0	170	263	24	5	4	4
West North Central States:								
Minnesota	2	0	142	103	10	0	6	3
Iowa	0	1	90	182	87	60	2	3
Missouri	0	0	114	87	72	40	2	7
North Dakota	0	0	24	47	10	6	3	0
South Dakota	0	0	16	31	41	15	1	1
Nebraska	1	0	87	120	45	71	0	1
Kansas	0	0	135	223	110	79	5	0
South Atlantic States:								
Delaware	0	0	12	2	0	0	3	0
Maryland ¹	0	0	99	105	0	0	7	2
District of Columbia	1	0	26	24	0	0	0	0
West Virginia	0	0	45	16	29	21	11	21
North Carolina	0	2	39	33	15	14	1	6
South Carolina	0	0	23	13	0	3	12	6
Georgia	1	0	24	20	0	15	7	6
Florida	0	0	11	10	0	0	0	3
East South Central States:								
Kentucky	0	0	39	112	20	43	2	6
Tennessee	2	0	70	52	10	0	18	4
Alabama	1	1	28	11	2	6	18	12
Mississippi	0	0	13	7	0	1	4	2
West South Central States:								
Arkansas	0	0	11	9	39	6	4	3
Louisiana	0	0	27	53	1	5	15	7
Oklahoma ¹	1	0	21	28	74	101	3	4
Texas	0	1	58	71	35	85	0	3

¹ Week ended Friday.

* Figures for 1930 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended March 22, 1930, and March 23, 1929—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929	Week ended Mar. 22, 1930	Week ended Mar. 23, 1929
Mountain States:								
Montana.....	0	0	42	21	9	4	0	0
Idaho.....	0	0	7	2	11	11	2	0
Wyoming.....	0	1	2	7	5	2	0	0
Colorado.....	0	0	20	20	9	26	7	1
New Mexico.....	0	0	20	27	3	0	0	3
Arizona.....	0	0	36	—	41	6	1	1
Utah ¹	0	0	6	6	0	2	0	1
Pacific States:								
Washington.....	0	1	61	20	71	32	6	5
Oregon.....	0	1	44	53	21	36	1	1
California.....	2	8	182	473	67	37	8	13

¹ Week ended Friday.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Menin-gococ- cus menin- gitiis	Diph- theria	Influ- enza	Malaria	Meas- sles	Pella- gra	Poli- omye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<i>January, 1930</i>										
Hawaii Territory.....	2	39	14	—	70	—	1	—	1	5
<i>February, 1930</i>										
Idaho.....	27	85	—	—	347	—	0	45	71	2
Illinois.....	44	633	138	—	2,337	—	6	2,541	493	21
Louisiana.....	18	69	156	21	428	7	1	78	25	37
Maine.....	1	15	47	—	74	—	2	233	0	14
Maryland.....	4	108	188	1	53	—	1	400	0	12
Michigan.....	120	281	36	2	2,028	1	3	1,365	311	11
Minnesota.....	11	48	9	—	1,023	—	1	575	33	11
Missouri.....	76	164	168	32	518	—	3	554	336	7
New York.....	85	577	—	3	2,449	—	10	2,128	22	82
North Carolina.....	17	145	157	—	46	91	4	234	79	10
Ohio.....	32	251	167	—	2,488	1	5	1,396	825	35
Oklahoma ¹	17	80	595	58	518	25	1	165	391	28
Pennsylvania.....	42	627	—	—	3,077	—	2	2,005	10	51
Rhode Island.....	0	48	1	—	13	—	0	135	0	2
West Virginia.....	11	39	135	—	295	—	0	197	141	31

<i>January, 1930</i>										
Hawaii Territory.....	Cases	Chicken pox:								
Chicken pox.....	95	Idaho.....	—	—	—	—	—	—	—	43
Conjunctivitis, follicular.....	54	Illinois.....	—	—	—	—	—	—	—	1,447
Hookworm disease.....	1	Louisiana.....	—	—	—	—	—	—	—	71
Impetigo contagiosa.....	3	Maine.....	—	—	—	—	—	—	—	234
Leprosy.....	3	Maryland.....	—	—	—	—	—	—	—	607
Mumps.....	26	Michigan.....	—	—	—	—	—	—	—	926
Psittacosis.....	1	Minnesota.....	—	—	—	—	—	—	—	366
Tetanus.....	2	Missouri.....	—	—	—	—	—	—	—	542
Trachoma.....	1	New York.....	—	—	—	—	—	—	—	2,756
Whooping cough.....	22	North Carolina.....	—	—	—	—	—	—	—	960
<i>February, 1930</i>										
Actinomycosis:	1	Ohio.....	—	—	—	—	—	—	—	1,863
Illinois.....	1	Oklahoma ¹	—	—	—	—	—	—	—	82
Anthrax:	1	Pennsylvania.....	—	—	—	—	—	—	—	2,752
New York.....	2	Rhode Island.....	—	—	—	—	—	—	—	71
Oklahoma ¹	1	West Virginia.....	—	—	—	—	—	—	—	284

¹ Exclusive of Oklahoma City and Tulsa.

	Cases	Paratyphoid fever—Continued.	Cases
Diarrhea and enteritis:			
Ohio (under 2 years).....	17	North Carolina.....	2
Dysentery:		Ohio.....	2
Illinois.....	12	Psittacosis:	
Louisiana.....	1	Maryland.....	9
Maryland.....	1	Puerperal septicemia:	
Minnesota (amebic).....	1	Illinois.....	7
New York.....	5	New York.....	10
Oklahoma ¹	5	Ohio.....	8
Food poisoning:		Pennsylvania.....	7
Ohio.....	1	Rabies in animals:	
German measles:		Illinois.....	7
Illinois.....	134	Louisiana.....	9
Maine.....	14	Maryland.....	4
Maryland.....	16	Missouri.....	9
New York.....	547	New York.....	8
North Carolina.....	18	Rhode Island.....	8
Ohio.....	51	Rabies in man:	
Pennsylvania.....	290	Michigan.....	1
Rhode Island.....	26	Seabees:	
Hookworm disease:		Maryland.....	1
Louisiana.....	14	Oklahoma ¹	1
Impetigo contagiosa:		Septic sore throat:	
Maryland.....	4	Idaho.....	1
Lead poisoning:		Illinois.....	8
Illinois.....	7	Louisiana.....	1
Ohio.....	3	Maine.....	1
Leprosy:		Maryland.....	25
Illinois.....	1	Michigan.....	41
Louisiana.....	1	Missouri.....	6
Lethargic encephalitis:		New York.....	41
Illinois.....	7	North Carolina.....	8
Maine.....	1	Ohio.....	48
Maryland.....	2	Oklahoma ¹	22
Michigan.....	5	Rhode Island.....	4
Minnesota.....	3	Tetanus:	
New York.....	10	Louisiana.....	2
Ohio.....	8	Maryland.....	2
Pennsylvania.....	7	New York.....	3
Rhode Island.....	1	Ohio.....	1
Milk sickness:		Pennsylvania.....	2
Illinois.....	1	Trachoma:	
Mumps:		Illinois.....	3
Idaho.....	63	Louisiana.....	11
Illinois.....	786	Minnesota.....	1
Louisiana.....	8	Missouri.....	9
Maine.....	287	New York.....	3
Maryland.....	76	Ohio.....	6
Michigan.....	591	Oklahoma ¹	9
Missouri.....	151	Pennsylvania.....	2
New York.....	2,142	Rhode Island.....	2
Ohio.....	785	Trench mouth:	
Oklahoma ¹	31	Oklahoma ¹	1
Pennsylvania.....	1,425	Trichinosis:	
Rhode Island.....	2	Minnesota.....	17
Ophthalmia neonatorum:		Ohio.....	1
Illinois.....	30	Pennsylvania.....	2
Maryland.....	1	Tularemia:	
New York.....	3	Illinois.....	10
Ohio.....	120	Louisiana.....	1
Pennsylvania.....	7	Maryland.....	1
Rhode Island.....	1	Ohio.....	3
Paratyphoid fever:		Undulant fever:	
Illinois.....	1	Illinois.....	6
Maine.....	3	Maine.....	1
New York.....	3	Maryland.....	2

¹ Exclusive of Oklahoma City and Tulsa.

	Cases	Whooping cough—Continued.	Cases
Undulant fever—Continued.			
Michigan	2	Louisiana	46
Minnesota	2	Maine	181
Missouri	12	Maryland	186
New York	8	Michigan	577
Ohio	4	Minnesota	223
Pennsylvania	5	Missouri	154
Vincent's angina:			
Maine	6	New York	1,645
Maryland	9	North Carolina	1,130
New York	90	Ohio	851
Oklahoma ¹	2	Oklahoma ¹	63
Whooping cough:			
Idaho	16	Pennsylvania	1,551
Illinois	811	Rhode Island	154
		West Virginia	187

¹ Exclusive of Oklahoma City and Tulsa.

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of February, 1930, by departments of health of certain States to other State health departments

Disease	Califor- nia	Connect- icut	Illinois	Minne- sota	New York	Ohio
Diphtheria				1		
Meningitis—epidemic				1		
Scarlet fever		1				
Smallpox			4			
Trachoma						
Tuberculosis	1		10	1		1
Typhoid fever	1			13	2	

¹ One carrier.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 96 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 31,985,000. The estimated population of the 89 cities reporting deaths is more than 30,395,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended March 15, 1930, and March 16, 1929

		1930	1929	Estimated expectancy
<i>Cases reported</i>				
Diphtheria:				
46 States		1,423	1,460	928
96 cities		639	765	
Measles:				
45 States		12,980	12,739	
96 cities		4,065	4,039	
Meningococcus meningitis:				
46 States		247	329	
96 cities		109	152	
Poliomyelitis:				
47 States		19	14	
Scarlet fever:				
46 States		5,479	5,944	
96 cities		2,123	1,969	1,619
Smallpox:				
46 States		1,549	1,055	
96 cities		155	75	84
Typhoid fever:				
46 States		152	142	
96 cities		34	27	30
<i>Deaths reported</i>				
Influenza and pneumonia:				
89 cities		1,039	1,246	
Smallpox:				
89 cities		0	0	

City reports for week ended March 15, 1930

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding weeks of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during non-epidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1921 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland	25	1	0	1	0	1	12	4
New Hampshire:								
Concord	0	0	1	0	0	2	0	4
Manchester	0	0	0	0	1	0	0	0
Nashua	1	0	0	0	0	4	0	0
Vermont:								
Barre	8	0	0	0	0	0	0	0
Massachusetts:								
Boston	60	38	15	3	0	244	51	15
Fall River	4	3	0	1	1	1	0	3
Springfield	15	4	7	0	0	1	5	5
Worcester	5	4	0	1	0	56	0	0
Rhode Island:								
Pawtucket	3	1	3	0	0	0	0	4
Providence	8	8	9	2	0	0	0	15
Connecticut:								
Bridgeport	1	6	3	1	0	0	0	3
Hartford	8	6	0	0	0	2	1	11
New Haven	39	1	0	0	0	0	5	6
MIDDLE ATLANTIC								
New York:								
Buffalo	22	12	6	0	0	2	8	15
New York	284	236	135	29	11	301	175	229
Rochester	9	8	3	0	0	8	4	5
Syracuse	23	5	0	0	0	0	111	7
New Jersey:								
Camden	1	6	0	0	0	0	0	5
Newark	59	16	24	4	0	181	15	11
Trenton	2	3	6	1	0	26	0	11
Pennsylvania:								
Philadelphia	96	69	24	11	7	111	65	66
Pittsburgh	29	19	9	0	7	244	9	46
Reading	31	3	0	0	0	1	2	4
Scranton	6	3	1	0	0	0	0	0
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	6	10	3	4	2	0	0	15
Cleveland	165	30	28	8	1	43	20	20
Columbus	19	4	3	1	1	45	7	6
Toledo	42	5	1	3	3	187	21	5
Indiana:								
Fort Wayne	3	2	0	0	0	0	0	3
Indianapolis	17	6	3	0	0	15	5	16
South Bend	0	1	0	0	0	0	0	1
Terre Haute	1	1	0	0	0	1	0	2
Illinois:								
Chicago	124	100	130	20	7	27	79	76
Springfield	13	1	0	1	1	2	0	0
Michigan:								
Detroit	83	50	38	8	2	624	72	45
Flint	19	3	2	0	0	8	7	5
Grand Rapids	3	2	0	0	1	1	1	2

City reports for week ended March 15, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued								
Wisconsin:								
Kenosha	4	2	0		0	0	0	1
Madison	2	0	1			53	1	
Milwaukee	178	17	7		0	7	110	7
Racine	8	2	1		0	3	0	0
Superior	0	0	1		0	23	0	0
WEST NORTH CENTRAL								
Minnesota:								
Duluth	3	0	0		0	76	0	1
Minneapolis	41	14	2		0	30	70	14
St. Paul	30	9	1		1	2	21	8
Iowa:								
Davenport	4	1	0			0	2	
Des Moines	2	2	0			52	3	
Sioux City	2	1	1			36	14	
Waterloo	25	0	0			63	2	
Missouri:								
Kansas City	25	6	8		0	15	0	12
St. Joseph	0	0	0		0	1	0	5
St. Louis	20	42	27	3		3	17	
North Dakota:								
Fargo	6	1	0		0	0	19	1
Grand Forks	1	0	0			0	0	
South Dakota:								
Aberdeen	3	0	0			0	0	
Sioux Falls	0	0	0			18	0	
Nebraska:								
Omaha	14	3	15		0	70	0	6
Kansas:								
Topeka	3	1	0	1	1	52	15	0
Wichita	30	2	3		0	55	2	1
SOUTH ATLANTIC								
Delaware:								
Wilmington	3	3	4		0	1	0	4
Maryland:								
Baltimore	165	24	22	16	3	6	3	34
Cumberland	2	1	0		0	0	0	1
Frederick	0	0	0		0	0	0	0
District of Columbia:								
Washington	37	13	14	2	1	14	0	14
Virginia:								
Lynchburg	4	0	2		0	110	8	6
Norfolk	8	2	2		0	2	63	6
Richmond	8	2	2		1	0	0	5
Roanoke	0	1	0		0	64	0	2
West Virginia:								
Charleston	0				0	1	2	2
Wheeling	4	2	0					
North Carolina:								
Raleigh	26	0	2		0	0	0	2
Wilmington	11	0	0		0	0	0	2
Winston-Salem	8	1	0		0	0	14	
South Carolina:								
Charleston	2	1	1	41		0	1	3
Columbia	4	0	0		3	0	1	1
Georgia:								
Atlanta	17	3	3	26	0	19	28	16
Brunswick	0	0	0		0	0	0	0
Savannah		1						
Florida:								
Miami	3	2	4	2	0	1	3	0
St. Petersburg	0	0	0		0	0	0	1
Tampa	13	1	1		1	16	19	0

City reports for week ended March 15, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL								
Kentucky:								
Covington	1	0	1		1	0	0	3
Tennessee:								
Memphis	16	4	0		3	0	17	10
Nashville	0	1	0	3	3	4	0	7
Alabama:								
Birmingham	9	2	3	13	5	2	1	11
Mobile	1	0	0		1	6	0	5
Montgomery	2	0	0	1		94	2	
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith	0	0	0			1	0	
Little Rock	13	1	0		0	1	0	0
Louisiana:								
New Orleans	3	12	10	3	7	50	0	14
Shreveport	4	0	0		0	1	5	3
Oklahoma:								
Oklahoma City	3	1	0		3	20	1	0
Tulsa	25	1	0			317	0	
Texas:								
Dallas	14	5	8	1	1	122	6	5
Fort Worth	6	4	1		1	2	0	3
Galveston	0	1	1		0	0	0	2
Houston	1	5	10		2	1	0	7
San Antonio	0	3	3		2	1	0	9
MOUNTAIN								
Montana:								
Billings	1	0	0		0	0	10	1
Great Falls	3	1	0		0	0	13	0
Helena	0	0	0		0	0	13	1
Missoula	0	0	0		0	0	0	
Idaho:								
Boise	0	0	0		0	0	0	0
Colorado:								
Denver	42	9	3		2	106	24	5
Pueblo	9	1	0		0	0	52	3
New Mexico:								
Albuquerque	0	0	0		0	21	10	3
Arizona:								
Phoenix	7	1	0		0	5	0	1
Utah:								
Salt Lake City	20	2	0		0	171	11	3
Nevada:								
Reno	0	0	0		0	1	0	1
PACIFIC								
Washington:								
Seattle	67	4	3			89	80	
Spokane	28	2	0	1		0	0	
Tacoma	18	1	3		0	32	2	2
Oregon:								
Portland	15	8	1		1	7	11	7
Salem	12	0	0		0	0	9	0
California:								
Los Angeles	83	41	19	20	1	238	41	15
Sacramento	9	2	0		0	10	46	6
San Francisco	49	18	6	2	0	560	108	3

City reports for week ended March 15, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
NEW ENGLAND											
Maine:											
Portland	3	1	0	0	0	0	0	0	0	7	23
New Hampshire:											
Concord	0	3	0	0	0	0	0	0	0	0	14
Manchester	3	0	0	0	0	0	0	0	0	0	32
Nashua	1	0	0	0	0	0	0	0	0	0	—
Vermont:											
Barre	0	0	0	0	0	3	0	0	0	2	5
Massachusetts:											
Boston	86	81	0	0	0	18	1	1	0	58	246
Fall River	5	0	0	0	0	2	0	0	0	15	—
Springfield	8	12	0	0	0	3	0	0	0	26	55
Worcester	10	14	0	0	0	2	0	1	0	16	52
Rhode Island:											
Pawtucket	2	1	0	0	0	0	0	0	0	13	14
Providence	12	22	0	0	0	4	0	0	0	14	64
Connecticut:											
Bridgeport	12	29	0	0	0	1	0	0	0	0	40
Hartford	6	8	0	0	0	0	0	0	0	2	55
New Haven	10	5	0	0	0	1	0	0	0	6	47
MIDDLE ATLANTIC											
New York:											
Buffalo	29	31	0	0	0	17	0	0	0	28	146
New York	372	374	0	0	0	124	8	8	0	82	1,684
Rochester	13	12	0	0	0	3	0	0	0	1	90
Syracuse	11	41	0	0	0	2	0	0	0	19	56
New Jersey:											
Camden	7	3	0	0	0	0	0	1	0	0	44
Newark	44	56	0	0	0	5	0	0	0	21	114
Trenton	5	12	0	0	0	3	0	0	0	2	42
Pennsylvania:											
Philadelphia	103	158	0	0	0	37	2	1	0	20	339
Pittsburgh	33	30	0	0	0	12	0	0	0	35	226
Reading	6	4	0	0	0	0	0	0	0	9	25
Scranton	3	4	0	0	0	0	1	1	0	0	—
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	20	29	2	11	0	17	1	0	0	6	164
Cleveland	47	141	0	0	0	14	1	0	0	94	206
Columbus	11	5	1	7	0	8	0	0	0	1	70
Toledo	14	28	2	5	0	4	1	2	1	11	91
Indiana:											
Fort Wayne	6	4	1	12	0	0	0	0	0	2	25
Indianapolis	12	18	9	3	0	3	0	1	0	5	—
South Bend	3	5	0	0	0	1	0	0	0	0	17
Terre Haute	3	3	1	0	0	0	0	0	2	0	22
Illinois:											
Chicago	136	341	2	6	0	48	2	1	0	107	706
Springfield	4	0	0	0	0	1	0	0	0	4	14
Michigan:											
Detroit	120	132	2	6	0	34	1	0	0	35	332
Flint	13	21	2	3	0	3	0	0	0	14	32
Grand Rapids	11	6	0	0	0	0	1	0	0	6	25
Wisconsin:											
Kenosha	2	11	0	0	0	0	0	9	0	5	11
Madison	5	5	0	0	0	0	0	0	0	26	—
Milwaukee	39	19	0	0	0	6	0	0	0	28	104
Racine	5	5	0	0	0	0	0	0	0	2	15
Superior	4	4	0	0	0	0	0	0	0	0	10

¹ Nonresident.

City reports for week ended March 15, 1930—Continued

City reports for week ended March 15, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber-cu-sis, deaths re-ported	Typhoid fever			Whoop-ing cough, cases re-ported	Deaths, all causes
	Cases, es-ti-mated ex-pectancy	Cases re-ported	Cases, es-ti-mated ex-pectancy	Cases re-ported	Deaths re-ported		Cases, es-ti-mated ex-pectancy	Cases re-ported	Deaths re-ported		
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0		0	0	0	0	0	
Little Rock	3	1	1	2	0	2	0	0	0	0	
Louisiana:											
New Orleans	7	19	0	0	0	13	2	2	0	0	151
Shreveport	1	1	1	0	0	0	0	0	0	0	27
Oklahoma:											
Oklahoma City	2	0	3	0	0	1	1	0	0	3	32
Tulsa	1	1	2	2			0	0		11	
Texas:											
Dallas	4	18	4	0	0	0	1	0	0	4	40
Fort Worth	4	8	2	0	0	6	1	0	0	0	28
Galveston	0	0	0	0	0	1	0	0	0	0	16
Houston	1	7	2	3	0	5	0	0	0	0	73
San Antonio	2	2	0	2	0	10	1	0	0	0	81
MOUNTAIN											
Montana:											
Billings	0	3	0	0	0	1	0	0	0	0	9
Great Falls	2	26	1	0	0	2	0	0	0	0	7
Helena	0	0	0	0	0	0	0	0	0	0	8
Missoula	0	0	0	0	0	0	0	0	0	0	7
Idaho:											
Boise	1	0	0	0	0	0	0	0	0	0	6
Colorado:											
Denver	15	4	1	0	0	12	0	0	0	32	76
Pueblo	1	1	0	0	0	0	0	6	0	6	14
New Mexico:											
Albuquerque	1	1	0	3	0	7	0	1	0	0	20
Arizona:											
Phoenix	0	0	0	10	0	4	0	0	0	1	13
Utah:											
Salt Lake City	4	7	2	0	0	2	0	0	0	20	26
Nevada:											
Reno	0	2	0	1	0	0	0	0	0	0	6
PACIFIC											
Washington:											
Seattle	10	23	3	8			1	3		12	
Spokane	8	1	8	27			0	0		12	
Tacoma	3	7	3	14	0	0	0	0	0	6	27
Oregon:											
Portland	6	3	13	12	0	4	1	0	0	11	92
Salem	1	0	1	0	0	0	0	0	0	11	
California:											
Los Angeles	36	39	2	4	0	31	0	0	0	17	251
Sacramento	3	7	1	3	0	2	0	0	0	4	30
San Francisco	24	36	2	1	0	10	1	2	0	3	154
Division, State, and city	Meningococcus meningitis			Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)			
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, es-ti-mated ex-pectancy	Cases	Deaths		
NEW ENGLAND											
Massachusetts:											
Boston	5	3	0	0	0	0	0	0	0	0	0
Fall River	1	0	0	0	0	0	0	0	0	0	0
Connecticut:											
Bridgeport	1	0	0	0	0	0	0	0	0	0	0
Hartford	1	0	0	0	0	0	0	0	1	0	0

City reports for week ended March 15, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC									
New York:									
New York.....	10	7	4	0	0	1	1	3	0
New Jersey:									
Newark.....	1	1	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia.....	2	0	0	0	0	0	0	0	0
Pittsburgh.....	8	5	0	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	1	0	0	0	0	0	0	0	0
Cleveland.....	5	3	0	0	0	0	0	0	0
Columbus.....	1	1	1	1	0	0	0	0	0
Toledo.....	1	1	0	0	0	0	0	0	0
Indiana:									
Indianapolis.....	6	0	0	0	0	0	0	0	0
Terre Haute.....	1	1	0	0	0	0	0	0	0
Illinois:									
Chicago.....	9	5	1	1	0	0	0	0	0
Michigan:									
Detroit.....	12	8	0	1	1	0	0	1	0
Flint.....	2	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth.....	1	0	0	0	0	0	0	0	0
Minneapolis.....	3	0	0	0	0	0	0	0	0
Iowa:									
Sioux City.....	11	—	0	—	0	—	0	0	—
Missouri:									
Kansas City.....	6	2	0	0	0	0	0	0	0
St. Louis.....	2	3	0	0	0	0	0	0	0
North Dakota:									
Fargo.....	0	0	0	1	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore.....	1	1	0	1	1	0	0	0	0
West Virginia:									
Wheeling.....	1	1	0	0	0	0	0	0	0
North Carolina:									
Raleigh.....	0	0	0	0	1	1	0	0	0
Wilmington.....	0	0	0	0	1	0	0	0	0
Winston-Salem.....	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston ¹	0	0	0	0	7	0	0	0	0
Georgia:									
Atlanta.....	4	2	0	0	1	1	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis.....	16	9	0	0	0	0	0	0	0
Nashville.....	0	1	0	0	0	0	0	0	0
Alabama:									
Birmingham.....	0	0	0	0	0	1	0	0	0
Montgomery.....	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith.....	1	0	0	0	0	0	0	0	0
Louisiana:									
New Orleans.....	0	0	0	0	1	0	0	0	0
Oklahoma:									
Shreveport.....	0	0	0	1	0	0	0	0	0
Texas:									
Dallas.....	0	0	0	0	0	1	0	0	0
Fort Worth.....	0	0	0	0	0	1	0	0	0

¹ Nonresident.¹ Dengue: 2 cases at Charleston, S. C.

City reports for week ended March 15, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MOUNTAIN									
Montana:									
Missoula.....	1	1	0	0	0	0	0	0	0
Colorado:									
Denver.....	0	1	0	0	0	0	0	0	0
Arizona:									
Phoenix.....	0	0	0	0	0	0	0	0	1
Utah:									
Salt Lake City.....	4	3	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle.....	1	0	0	0	0	0	0	0	0
Spokane.....	1	0	0	0	0	0	0	0	0
California:									
Los Angeles.....	1	2	0	0	0	0	1	0	0
San Francisco.....	0	1	0	1	1	0	0	0	0

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended March 15, 1930, compared with those for a like period ended March 16, 1929. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have an estimated aggregate population of more than 32,000,000. The 91 cities reporting deaths have more than 30,500,000 estimated population.

Summary of weekly reports from cities, February 9 to March 15, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929¹

DIPHTHERIA CASE RATES

	Week ended—									
	Feb. 15, 1930	Feb. 16, 1929	Feb. 22, 1930	Feb. 23, 1929	Mar. 1, 1930	Mar. 2, 1929	Mar. 3, 1930	Mar. 9, 1929	Mar. 15, 1930	Mar. 16, 1929
98 cities.....	97	121	93	118	² 107	121	90	133	³ 104	126
New England.....	95	130	100	117	111	123	84	108	84	135
Middle Atlantic.....	83	147	87	139	109	140	89	185	99	159
East North Central.....	115	115	102	106	⁴ 125	131	95	130	135	121
West North Central.....	104	150	93	131	118	135	116	144	108	152
South Atlantic.....	93	73	110	67	88	64	71	67	⁵ 99	84
East South Central.....	74	82	108	68	61	55	40	68	27	55
West South Central.....	146	114	86	175	108	145	153	114	120	95
Mountain.....	60	44	69	44	⁶ 0	61	86	61	26	44
Pacific.....	87	77	61	106	73	72	45	36	73	65

¹ The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1930 and 1929, respectively.

² South Bend, Ind., and Denver, Colo., not included.

³ Charleston, W. Va., and Savannah, Ga., not included.

⁴ South Bend, Ind., not included.

⁵ Denver, Colo., not included.

Summary of weekly reports from cities, February 9 to March 15, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

MEASLES CASE RATES

	Week ended—									
	Feb. 15, 1930	Feb. 16, 1929	Feb. 22, 1930	Feb. 23, 1929	Mar. 1, 1930	Mar. 2, 1929	Mar. 8, 1930	Mar. 9, 1929	Mar. 15, 1930	Mar. 16, 1929
98 cities.....	420	404	456	456	2 548	578	634	537	3 662	679
New England.....	432	541	383	382	463	635	543	424	680	617
Middle Atlantic.....	224	114	267	140	364	158	440	162	418	135
East North Central.....	253	761	269	883	351	1,142	447	983	476	1,387
West North Central.....	793	983	759	1,253	920	1,555	918	1,690	765	1,967
South Atlantic.....	306	135	403	167	136	197	489	234	349	380
East South Central.....	263	41	681	0	850	62	810	62	715	41
West South Central.....	743	50	799	80	755	57	542	103	661	141
Mountain.....	738	1,019	747	923	2,004	697	2,051	818	2,386	636
Pacific.....	1,450	164	1,483	145	1,908	229	1,845	142	2,194	133

SCARLET FEVER CASE RATES

98 cities.....	300	277	301	261	2 367	298	329	298	346	324
New England.....	350	373	374	292	363	337	394	308	390	368
Middle Atlantic.....	246	222	255	202	325	230	268	228	345	266
East North Central.....	438	340	425	341	513	402	452	411	466	418
West North Central.....	324	360	321	373	334	321	338	356	302	368
South Atlantic.....	231	157	216	144	236	137	189	155	200	146
East South Central.....	169	260	169	185	196	219	196	198	108	232
West South Central.....	116	255	101	270	116	202	149	270	179	266
Mountain.....	412	87	300	113	685	218	292	157	369	157
Pacific.....	314	328	236	292	411	493	281	410	267	444

SMALLPOX CASE RATES

98 cities.....	27	8	24	12	2 31	16	25	12	2 25	12
New England.....	7	0	0	0	0	2	2	0	0	4
Middle Atlantic.....	0	0	0	0	0	0	0	0	0	0
East North Central.....	33	15	20	15	440	24	24	18	30	20
West North Central.....	47	0	91	15	89	15	78	6	68	31
South Atlantic.....	5	2	2	4	2	7	2	6	4	6
East South Central.....	27	0	13	0	7	7	20	7	27	7
West South Central.....	105	23	56	95	120	107	67	95	26	42
Mountain.....	34	70	17	35	51	87	9	44	9	17
Pacific.....	104	24	118	19	102	24	123	17	135	22

TYPHOID FEVER CASE RATES

98 cities.....	6	5	5	4	2 8	4	8	5	2 6	5
New England.....	2	4	4	9	0	2	2	4	4	2
Middle Atlantic.....	6	4	7	4	4	2	4	4	5	4
East North Central.....	3	2	1	2	1	0	3	3	1	2
West North Central.....	9	12	2	6	6	8	8	4	4	2
South Atlantic.....	7	6	13	4	55	2	37	6	12	7
East South Central.....	20	14	7	7	34	14	13	7	27	11
West South Central.....	7	11	4	8	0	10	34	19	7	26
Mountain.....	0	0	9	0	10	9	0	0	51	10
Pacific.....	5	7	12	5	7	7	7	17	12	10

¹ South Bend, Ind., and Denver, Colo., not included.

² Charleston, W. Va., and Savannah, Ga., not included.

⁴ South Bend, Ind., not included.

⁶ Denver, Colo., not included.

Summary of weekly reports from cities, February 9 to March 15, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

INFLUENZA DEATH RATES

	Week ended—									
	Feb. 15, 1930	Feb. 16, 1929	Feb. 22, 1930	Feb. 23, 1929	Mar. 1, 1930	Mar. 2, 1929	Mar. 8, 1930	Mar. 9, 1929	Mar. 15, 1930	Mar. 16, 1929
	20	54	20	45	20	39	17	34	14	33
91 cities.....										
New England.....	4	56	16	40	11	20	18	16	2	25
Middle Atlantic.....	15	44	16	35	17	30	13	25	12	31
East North Central.....	18	36	16	33	16	31	13	31	9	23
West North Central.....	12	33	12	45	15	39	3	21	6	27
South Atlantic.....	29	60	20	69	26	67	33	47	18	37
East South Central.....	66	224	81	82	59	149	66	75	96	119
West South Central.....	73	152	73	133	69	86	34	117	46	102
Mountain.....	34	87	26	78	34	52	34	61	17	35
Pacific.....	21	41	3	38	12	31	3	22	3	16

PNEUMONIA DEATH RATES

91 cities.....	176	222	182	193	198	222	170	203	164	184
New England.....	177	303	221	233	213	272	202	218	155	200
Middle Atlantic.....	202	254	200	192	230	240	191	233	204	197
East North Central.....	129	183	153	170	180	180	142	160	128	155
West North Central.....	109	180	151	207	136	228	127	195	142	180
South Atlantic.....	196	243	203	238	216	235	203	234	183	198
East South Central.....	250	164	272	157	199	284	243	239	205	201
West South Central.....	276	211	188	250	199	207	172	228	153	230
Mountain.....	335	244	240	226	223	279	146	183	120	252
Pacific.....	132	123	83	129	77	148	92	138	80	135

¹ South Bend, Ind., and Denver, Colo., not included.

² Charleston, W. Va., and Savannah, Ga., not included.

⁴ South Bend, Ind., not included.

⁸ Denver, Colo., not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended March 1, 1930.—The Department of Pensions and National Health reports cases of certain communicable diseases in Canada for the week ended March 1, 1930, as follows:

Province	Cerebro-spinal fever	Influenza	Lethargic encephalitis	Small-pox	Typhoid fever
Prince Edward Island ¹					
Nova Scotia		12			
New Brunswick					1
Quebec	1	14	1	8	26
Ontario	1				1
Manitoba ¹			1	10	1
Saskatchewan				3	
Alberta				1	
British Columbia					
Total	2	26	2	22	30

¹ No case of any disease listed in the table was reported during the week.

Ontario Province—Communicable diseases (comparative)—Four weeks ended February 22, 1930.—The following table shows the number of cases of certain communicable diseases, with deaths therefrom, reported in the Province of Ontario, Canada, for the four weeks ended February 22, 1930, as compared with the corresponding period of 1929:

Disease	1930		1929	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis	4	5	10	5
Chancroid	1			
Chicken pox	795	2	563	
Conjunctivitis			1	
Diphtheria	218	13	273	7
Erysipelas	3			
German measles	288		26	
Goiter	1		3	1
Gonorrhœa	111		164	
Influenza	68	13	509	100
Lethargic encephalitis		2	4	
Measles	1,605	2	3,521	6
Mumps	102		548	
Paratyphoid fever			1	
Pneumonia		211		228
Poliomyelitis				2
Puerperal fever				3
Scarlet fever	905	3	465	5
Septic sore throat	2	1	1	
Smallpox ¹	77		133	
Syphilis	169		131	
Tuberculosis	101	52	114	56
Typhoid fever	27	1	87	3
Undulant fever	2			
Whooping cough	380		386	2

¹ The cases of smallpox for February, 1930, were reported in the following municipalities: Napanee, 10, Sudbury, 16; Woodstock, 1; Alfred, 8; North Bay, 1; Ottawa, 7; Thurlo, 3; East Ferris, 5; Fort William, 4; Welland, 1; Hinsworth, N., 1; Chapman, 1; Calvin, 1; Magnetawan, 4; Trenton, 3; Sturgeon Falls, 6; Dummer, 8.

Quebec Province—Communicable diseases—Week ended March 15, 1930.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended March 15, 1930, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	3	Poliomyelitis.....	1
Chicken pox.....	99	Puerperal septicemia.....	3
Diphtheria.....	38	Scarlet fever.....	131
German measles.....	18	Tuberculosis.....	77
Influenza.....	2	Typhoid fever.....	7
Measles.....	168	Whooping cough.....	121
Mumps.....	169		

Quebec Province—Vital statistics—December, 1929.—Births, deaths, and marriages for the month of December, 1929, in the Province of Quebec, Canada, with deaths from certain principal causes, are shown in the following table:

Estimated population.....	2,691,000	Deaths from—Continued.	
Births.....	6,682	Heart disease.....	349
Birth rate per 1,000 population.....	29.2	Influenza.....	83
Deaths.....	3,010	Lethargic encephalitis.....	1
Death rate per 1,000 population.....	13.8	Measles.....	26
Marriages.....	1,181	Pneumonia.....	318
Deaths under 1 year.....	733	Scarlet fever.....	22
Deaths under 1 year per 1,000 births.....	109.7	Syphilis.....	9
Deaths from—		Tuberculosis (pulmonary).....	228
Cancer.....	157	Tuberculosis (other forms).....	37
Cerebrospinal meningitis.....	3	Typhoid fever.....	8
Diabetes.....	34	Violence.....	87
Diarrhea.....	103	Whooping cough.....	32
Diphtheria.....	57		

CHINA

Meningitis.—During the week ended March 15, 1930, 20 cases of meningitis were reported in Shanghai, China.

GREAT BRITAIN

England and Wales—Vital statistics—October—December, 1929.—During the fourth quarter of the year 1929, 150,496 births and 112,712 deaths were registered in England and Wales, giving a birth rate, on an annual basis, of 15.1 per 1,000 population, and a death rate of 11.3 per 1,000. The figures are provisional. The mortality of infants under 1 year of age was 69 per 1,000 live births.

During the 13 weeks ended December 28, 1929, deaths from certain communicable diseases were reported in 107 county boroughs and great towns, including Greater London, as follows:

Disease	Deaths	Deaths per 1,000 population	Disease	Deaths	Deaths per 1,000 population
Diarrhea and enteritis (under 2 years).....	1,225		Scarlet fever.....	106	0.02
Diphtheria.....	574	0.12	Smallpox.....	3	
Influenza.....	687	.14	Typhoid fever.....	54	
Measles.....	315	.06	Whooping cough.....	237	.05

Deaths from certain communicable diseases were reported in 157 smaller towns for the quarter ended December 31, 1929, as follows:

Disease	Deaths	Disease	Deaths
Diarrhea and enteritis (under 2 years)	147	Scarlet fever	26
Diphtheria	92	Typhoid fever	21
Influenza	187	Whooping cough	53
Measles	75		

England and Wales—Communicable diseases—Thirteen weeks ended December 28, 1929.—During the 13 weeks ended December 28, 1929, cases of certain communicable diseases were reported in England and Wales, as follows:

Disease	Cases	Disease	Cases
Diphtheria	21,696	Puerperal pyrexia	1,386
Ophthalmia neonatorum	1,230	Scarlet fever	42,142
Pneumonia	13,978	Smallpox	2,432
Puerperal fever	628	Typhoid fever	905

England and Wales—Birth and death rates—Year 1929.—The following birth and death rates for England and Wales are taken from a report issued by the Registrar General. The rates for London and the groups of towns are for civilians only. The figures are provisional.

Place	Rate per 1,000 population							
	Births	Deaths, all causes	Deaths from—					
			Diphtheria	Influenza	Measles	Typhoid fever	Violence	Whooping cough
England and Wales	16.3	13.4	0.08	0.74	0.08	0.01	0.55	0.15
107 county boroughs and great towns, including London	16.6	13.7	.09	.76	.12	.01	.50	.19
157 smaller towns	16.0	12.3	.07	.71	.06	.01	.45	.15
London	15.7	13.8	.08	.60	.04	.01	.56	.26

Scotland—Vital statistics—Quarter ended December 31, 1929.—The Registrar General of Scotland has published the following statistics for the fourth quarter of the year 1929:

Population, estimated	4,896,600	Deaths from—Continued	
Births	21,998	Influenza	23
Birth rate per 1,000 population	17.8	Lethargic encephalitis	34
Deaths	15,353	Malaria	1
Death rate per 1,000 population	12.4	Measles	96
Marriages	8,447	Nephritis (acute)	56
Deaths under 1 year	1,768	Nephritis (chronic)	451
Deaths under 1 year per 1,000 births	80	Paratyphoid fever	2
Deaths from—		Pneumonia	735
Anthrax	1	Poliomyelitis	9
Bronchitis	740	Puerperal sepsis	59
Broncho-pneumonia	505	Scarlet fever	39
Cerebrospinal meningitis	40	Syphilis	22
Diabetes	146	Tetanus	2
Diarrhea	64	Tuberculosis (pulmonary)	600
Diphtheria	135	Tuberculosis (other forms)	206
Dysentery	3	Typhoid fever	6
Erysipelas	38	Whooping cough	81
Heart disease	2,159		

Scotland—Vital statistics—Year, 1929.—The following statistics are taken from a report of the Registrar General of Scotland and show the number of births, marriages, and deaths registered in Scotland for the year 1929, together with the rate per 1,000 estimated population:

	Total number	Rate per 1,000 population			Total number	Rate per 1,000 population
Births.....	92,876	19.0	Deaths.....		70,917	14.5
Marriages.....	32,992	6.8	Deaths under 1 year.....		8,058	-----

Deaths under 1 year per 1,000 births, 86.7.

IRELAND

Irish Free State—Vital statistics—Year 1929.—The following summary of births and deaths in the Irish Free State for the year 1929 is taken from a report issued by the Registrar General. The principal causes of death, including deaths from communicable diseases, are as follows:

Estimated population.....	2,971,992	Deaths from—Continued.	
Births.....	58,342	Influenza.....	1,629
Birth rate per 1,000 population.....	19.8	Measles.....	134
Deaths.....	42,074	Scarlet fever.....	60
Death rate per 1,000 population.....	14.6	Tuberculosis (pulmonary).....	3,034
Deaths from:		Tuberculosis (other forms).....	740
Cancer.....	3,016	Typhoid fever.....	78
Diarrhea and enteritis (under 2 years).....	544	Typhus fever.....	8
Diphtheria.....	292	Violence.....	924
Dysentery.....	5	Whooping cough.....	378

ITALY

Communicable diseases—Four weeks ended October 27, 1929.—During the four weeks ended October 27, 1929, communicable diseases were reported in the Kingdom of Italy as follows:

Disease	Sept. 30-Oct. 6		Oct. 7-13		Oct. 14-20		Oct. 21-27	
	Cases	Com-munes affected	Cases	Com-munes affected	Cases	Com-munes affected	Cases	Com-munes affected
Anthrax.....	93	61	51	39	48	31	29	25
Cerebrospinal meningitis.....	7	5	6	6	8	8	3	3
Chicken pox.....	52	29	76	30	102	62	82	50
Diphtheria and croup.....	641	340	548	284	791	379	657	328
Dysentery.....	50	25	34	14	34	18	18	14
Lethargic encephalitis.....	2	2	2	2	2	2	1	1
Measles.....	541	165	653	117	1,050	189	606	154
Poliomyelitis.....	38	28	42	24	28	21	13	13
Scarlet fever.....	616	220	515	200	686	239	488	212
Typhoid fever.....	1,906	784	1,146	519	1,383	605	892	472

JAMAICA

Communicable diseases—Four weeks ended March 1, 1930.—During the four weeks ended March 1, 1930, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the Island of Jamaica outside of Kingston, as follows.

Disease	Kings-ton	Other localities	Disease	Kings-ton	Other localities
Cerebrospinal meningitis.....	1	57	Puerperal fever.....	2	1
Chicken pox.....	7		Scarlet fever.....	30	53
Diphtheria.....		1	Tuberculosis.....	14	36
Dysentery.....	3	3	Typhoid fever.....		
Leprosy.....		3			

MEXICO

Vera Cruz—Communicable diseases—Six weeks ended March 8, 1930.—During the six weeks ended March 8, 1930, deaths from certain communicable diseases were reported in Vera Cruz, Mexico, as follows:

Disease	Week ended—						Total
	Feb. 1, 1930	Feb. 8, 1930	Feb. 15, 1930	Feb. 22, 1930	Mar. 1, 1930	Mar. 8, 1930	
Bronchitis.....	1			2	1	1	5
Cancer.....			2			1	3
Gastro-intestinal disorders.....	10	8	3	7	8	8	44
Epilepsy.....						1	1
Hookworm disease.....		1				1	2
Malaria.....	1		3	2		1	7
Pneumonia.....	1	1	3	2	4	1	12
Tetanus.....		1			1	1	3
Tuberculosis.....	7	6	7	4	5	10	39
Typhoid fever.....	1						1

PANAMA CANAL ZONE

Communicable diseases—November—December, 1929.—During the months of November and December, 1929, certain communicable diseases, including imported cases, were reported in the Panama Canal Zone and terminal cities as follows:

Disease	November		December	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis.....				2
Chicken pox.....	47			30
Diphtheria.....	42			29
Dysentery (amebic).....	3	3	1	1
Dysentery (bacillary).....	1			
Malaria.....	118	4	144	2
Measles.....	8			6
Mumps.....	4			3
Pneumonia.....		27		27
Poliomyelitis.....				1
Scarlet fever.....				1
Tuberculosis.....		27		27
Typhoid fever.....	2	2	1	
Whooping cough.....	3			17

VIRGIN ISLANDS

Communicable diseases—February, 1930.—During the month of February, 1930, cases of certain communicable diseases were reported in the Virgin Islands as follows:

St. Thomas and St. John:	Cases	St. Croix:	Cases
Syphilis.....	2	Chicken pox.....	0
Tuberculosis.....	1	Mumps.....	1

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Hygiene, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases; D, deaths; P, present]

Place	Week ended—						March, 1930					
	Aug. 25- Sept. 21, 1929	Sept. 20- Oct. 19, 1929	Oct. 17- Nov. 16, 1929	Nov. 14- Dec. 14, 1929	December, 1929	January, 1930	February, 1930	March 1	March 8	March 15	March 22	March 29
China:												
Amoy	C 1	D 1										
Canton	C 1	D 1	4	2								
Henkow												
Manchuria—												
Dairen												
Newchwang												
Nanking	C 1	D 37	P 984	35	11	12	2					
Shanghai												
Swallow												
Tientsin												
Chosen: Chemulpo	C 1	D 26,866	P 16,334	17,340	19,692	4,619	2,880	2,878	1,973	1,972		
India:	D 16,667	D 10,031	D 10,650	D 10,903	D 2,602	D 1,731	D 1,087	D 1,087	D 1,122			
Bombay	C 1	D 1										
Calcutta	C 135	D 100	D 252	D 40	D 38	D 15	D 45	D 44	D 41	D 33	D 34	D 33
Karachi	C 50	D 70	D 129	D 114	D 28	D 27	D 9	D 26	D 28	D 21	D 23	D 23
Madras	C 11	D 11	D 3	D 2	D 2	D 2	D 1	D 1	D 1	D 1	D 1	D 1
Nepatam												
Rangoon												
Tuticorin												

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

CHOLERA—Continued

[C indicates cases; D, deaths; P, present]

Place	Week ended—						Week ended—						Week ended—						Week ended—	
	Aug. 25- Sept. 21, 1929		Sept. 22- Oct. 19, 1929		Oct. 20- Nov. 16, 1929		Nov. 17- Dec. 14, 1929		Dec. 21- Dec. 29, 1929		January, 1930		February, 1930		March, 1930		April, 1930		May, 1930	
India (French):																				
Chander Nagar	C	1	5	14			1													
Karikal	D																			
Pondicherry Province	C	3	3	4			1													
India (Portuguese)	D	2	1																	
India (see also table below):																				
Indo-China (see also table below):																				
Phnompenh	C	3	61	43	4	2		1				2	3	3	3		2	6	2	
Selangor and Cholon	D	2	33	37	3	2		1				2	2	2	1		2	3	5	
Japan	D																			
Kobe	C	9	3																	
Osaka	C	4	14																	
Shimoneoeki	C	2																		
Siam	D	26	9	7	3	1	2	3	3	3	2									
Ayudhaya	D	19	4	3																
Bangkok	C	10	4	6	1	2	3	3	2											
Dhannapuri	D	5	2	1																
Lohpuri	D	2																		
Nagara Rajisma	D	3	2																	
On vessel:																				
S. S. Shantial, at Shantial	D																			
S. S. at Suva, Fiji Islands																				
S. S. Sutley, at Batavia, from Caleutta	C																			
																	1			

Places	September, 1929			October, 1929			November, 1929			December, 1929			January, 1930			February, 1930		
	1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	
Indo-China (French) (see also table above):																		
Annam ¹	C	1																
Cambodia ¹	C	38	221	2	43													
Cochin-China ¹	CC	45	3	15	15													
Laos ¹	C	12																

¹ Reports incomplete.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

P1. AGGREGATE

[D indicates cases; D deaths; P present.]

East Java and Madura.....	C 60	41	29	1	1	1	1	1	1	1	1	1
Java and Madura.....	D 60	43	29	1	1	1	1	1	1	1	1	1
Surabaya.....	D 275	475	537	131	117	106	104	71	92	1	1	1
Ecuador (see table below)	D 4	4	4	4	4	4	4	4	4	4	4	4
Egypt: Alexandria.....	C 13	11	6	2	1	1	1	1	3	1	1	1
Assout.....	D 1	4	3	2	1	1	1	1	1	1	1	1
Assuan.....	C 1	1	1	2	2	2	2	2	2	2	2	2
Behera.....	C 2	1	1	1	1	1	1	1	1	1	1	1
Beni Suef.....	C 2	1	1	1	1	1	1	1	1	1	1	1
Dakahlieh.....	C 1	1	1	1	1	1	1	1	1	1	1	1
Gharbieh.....	D 6	3	2	2	2	2	2	2	2	2	2	2
Port Said.....	D 4	2	2	1	1	1	1	1	1	1	1	1
France: Paris.....	D 1	1	1	1	1	1	1	1	1	1	1	1
Greece (see also table below):	C 1	1	1	1	1	1	1	1	1	1	1	1
Messenia.....	C 3	2	1	1	1	1	1	1	1	1	1	1
Petras.....	C 3	2	1	1	1	1	1	1	1	1	1	1
Piraeus.....	C 6	2	1	1	1	1	1	1	1	1	1	1
Pyrgos.....	C 4,395	4,374	3,457	625	684	976	808	837	1,160	1,143	1,143	1,143
Hawaii: Hamakua—Kukuihale—Plague-infected rats.....	C 8,334	8,265	6,016	1,036	1,107	1,407	1,407	1,407	1,407	1,407	1,407	1,407
India.....	D 4,374	4,374	3,457	625	684	976	808	837	1,160	1,143	1,143	1,143
Bassel.....	D 1	1	1	1	1	1	1	1	1	1	1	1
Bombay.....	D 1	1	1	1	1	1	1	1	1	1	1	1
Plague-infected rats.....	D 32	31	36	3	8	9	7	10	11	11	13	13
Madras Presidency.....	D 139	152	236	132	171	14	19	8	8	11	13	13
D 64	130	108	55	101	6	12	4	6	4	10	10	10
D 5	2	1	1	1	2	1	1	2	2	1	3	3
D 6	2	1	1	1	1	1	1	2	2	1	2	2
Rangoon.....	D 6	6	6	2	5	5	5	5	5	5	5	5
Plague-infected rats, Indo-China (see also table below):	D 1	2	2	1	1	1	1	1	1	1	1	1
Phnompenh.....	C 1	2	5	5	5	5	5	5	5	5	5	5
Salgon and Cholon.....	D 2	2	2	1	1	1	1	1	1	1	1	1

¹ On Mar. 11, 3 deaths from bubonic plague were reported in Andalman, Catamarca Province, Argentina, since Feb. 5, 1930.

² 21 cases of plague with 8 deaths were reported Jan. 29, 1930, in the State of São Paulo, Brazil; 15 of these cases were in the city of São Paulo.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAQUE—Continued

[C indicates cases; D deaths; P present]

			P						
Union of Socialist Soviet Republics:									
Kazaks.	C	1							
Ural—Kirghiz.	C	17	13	4					
Union of South Africa:	C	13	5	1					
Cape Province	D	7	6	1	7				
Orange Free State	D	4	3		1	1			
Transvaal	D				1	1	6	5	1
On vessel:									
Steamship at Porto Novo, from Lagos.	C	1							
At Rio de Janeiro, Brazil, from Argentina.	C								
Place	Au-	Octo-	No-	De-	Janu-	Sept-	Octo-	Nov-	De-
	gust,	tem-	cem-	cem-	ary,	tem-	tem-	em-	cem-
	1929	1929	1929	1929	1930	1929	1929	1929	1930
British East Africa (see also table above):									
Kenya:	C	28	146	157	54				
Uganda	C	511	384	170	216	87			
Ecuador: Guayaquil	D	740	451	351	104	199	75		
Plague-infected rats	D	6	7	12	14	17	8		
Greece (see also table above):	C	1	3	4	3	6			
Indo-China (see also table above):	C	2	5	9	13	4			
Madagascar (see also table above):	C	2	5	2	1				
Ambositra Province	C	1	2	2	1				
Antsirabe Province	C	48	196	203	182	10	4		
Iasy Province	D	46	182	163	163				
Majunga Province	D	9	9	2	42				
Miarinarivo	D	2							
	D	11	11	5					

¹ Incomplete reports.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX

IC indicates cases; D, deaths; P, present.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

[C indicates cases; D, deaths; P, present]

State North and vicinity. Eleven deaths in preceding 2 weeks.

CHOLEMIA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SWAT IN BOX Continued

[C indicates cases; D, deaths; P, present]

Place	January, 1930						February, 1930						
	August, 1929		September, 1929		October, 1929		November, 1929		December, 1929		January, 1930		
	1-10	11-20	1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-31		
Belgian Congo.....													
C.....	725		42	41	33								
D.....	19		2	4									
Dahomey.....			19	19									
Indo-China (see also table above)													
C.....	263	64	128	245		142		136		184	148		
C.....	2												
C.....	29	2			P		17		4	225	12	P	
D.....	37	28	60	60	10	9	6	18	6	46	4	7	
Syria: Beirut.....			1	6									
Place	Place						Place						
	Sep- tem- ber, 1929	No- vem- ber, 1929	De- cem- ber, 1929	Jan- uary, 1930	Fe- b- ru- ary, 1930		Sep- tem- ber, 1929	No- vem- ber, 1929	De- cem- ber, 1929	Jan- uary, 1930	Fe- b- ru- ary, 1930		
Bolivia: La Paz.....	C.....	120	22				C.....	3	12	41	84	29	74
British East Africa (see also table above)	C.....	66	278		12		C.....	62	57	153	37	P	
Kenya.....	C.....	2	2	2	1		C.....	41	100	136	12		
Chosen.....	C.....	2	2	2	4	12	C.....	9	29	29	12		
Mexico: Durango (see also table above).....	D.....						D.....						

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

Place	Week ended—																	
	Aug. 25- Sept. 21, 1929			Oct. 20- Nov. 16, 1929			Nov. 17- Dec. 14, 1929			December, 1929			January, 1930			February, 1930		
Algeria:																		
Constantine Department	C	4	10	2	1	1												
Oran	C	3	1	1	3	1												
Bolivia: La Paz	C				13	14												
Brazil: São Paulo	C	14					9						41					
Bulgaria:	D						1						2					
Sofia	D						1						1					
Chile:	D													1				
Talcahuano	D												1					
Valparaíso	C													1				
China: Tientsin																		
Chosen (see table below)																		
Czechoslovakia (see table below)																		
Egypt:																		
Alexandria	C	1	2										9					
Assuan	D												1					
Beheira Province	D	6	16	2									7					
Cairo	D	2	4	1														
Dakahlieh	D	3	1										1					
Port Said	D																	
Suez	C												2					
Greece (see table below)																		
Iraq: Baghdad Liwa	C												1					
Ireland (Irish Free State): Donegal County—Dunfanaghy	D												1					

Latvia (see table below).

Latin Americans (see table below).
Mexico:

Mexico City, including Mexico, Morocco, Palestine, Peru: A require (see Table below).

Portugal: Arequipa (see table below).....

Portugal: Opero.....
Romania.....
Tunisia

Union of South Africa; Turkey (see table below).

tion of South Africa.
Cape Province
Natal

Orange Free State
Transvaal
Kynsna (see table below)

120

• Press reports show that 1

111

Place

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Chosen: Seonl
Czechoslovakia
France

Greece: Athens
Latvia

Lithuania.....

111

During the month of Sept

Press reports show that 10 deaths from typhus fever occurred in São Paulo, Brazil, from Nov. 3 to 30, 1920.

1 Press reports show that 10 deaths from typhus fever occurred in São Paulo, Brazil, from Nov. 3 to 30, 1929.

YELLOW PAPER

During the month of September, 1929, cases of yellow fever were reported as follows: *Nictheroy*, Brasil, 1 case; *Rio de Janeiro*, Brasil, 2 cases; *Monrovia*, Liberia, 1 case.

Y